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TANG, KAREN C				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

09/775,170

Applicant(s)

SVOBODA ET AL.

Examiner

KAREN C. TANG

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17, 21 and 23-47 is/are pending in the application.
- 4a) Of the above claim(s) 42-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 21 and 23-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### **DETAILED ACTION**

- A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/14/08 has been entered.
- Claims 1-17, 21, 23-47 are presented for further examination.
- Claims 42-47 are newly added.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-17, 21, 23-41 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

"Computer –Readable Medium" is intended to use as signal according to applicant's own specification (US 2002/0104011, par 0026). Therefore, fails to be limited to embodiments which fall within a statutory category. Correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19, 21, 23-28 recites the limitation "the at least one archival systems" in Claim 19, Lines 20. There is insufficient antecedent basis for this limitation in the claim.

Claims 19, 21, 23-28 recite the limitation "the replicated data" in Claim 19, Lines 20. There is insufficient antecedent basis for this limitation in the claim.

Claims 42-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what applicant meant by "the at least one intermediate nodes includes a plurality of intermediate nodes, and the at least one initiating node includes a plurality of initiating nodes"

For the examining purpose, the limitation is interpreted as "there are plurality of intermediate nodes and plurality of initiating nodes".

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 19, 21, 23-25, 36, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachner III et al hereinafter Bachner (US 2007/0055762) in view of Birkler et al hereinafter Birkler (US 6,466,951)

1. Referring to Claim 1, 19, 36, 37 and 38, Bachner discloses in a method of replicating data in a network communication system comprising:  
utilizing a wireless communication system that does not require reliable network connection (wireless network does not provide reliable network connection);  
and which includes a first communication node (wireless phone, refer to 0027, Lines 2) and a second communication node (32, refer to 0026);  
at least one communication node of the plurality is mobile and wherein at least one of the plurality of communication node is an intended archival system, and a storage device located at each communication node of the plurality (refer to 0026);  
using a first monitor at the first communication node and a second monitor at the second communication node to determine when the first and second communication nodes are within a communication range of each other, wherein at least one of the first and second nodes is mobile (refer to 0027, Lines 16, Bluetooth technology used on both nodes, provides dynamically connected to each other and transfer information when both nodes realized that they are within range); creating a dynamic connection between the first and second nodes while they are within the communication range (Bluetooth technology provides the functionality.);

employing an opportunistic data transfer between the first and second communication nodes across the dynamic connection while the dynamic connection is activated, wherein the opportunistic data transfer comprises (Bluetooth technology provide data transfer when the two nodes are in fact, within range, refer to 0027, Lines 16, and 0035, Lines 20-31): retaining for future communication, first data element (data at the wireless phone) at the first communication node and second data element (data at 32, refer to 0026) at the second communication node when the dynamic connection is inactive (refer to 0030, refer to 0030); replicating the first data elements and the second data elements at each of the first and second communication nodes by propagating a redundant copy of the first data elements and the second data elements when the dynamic connection is active (refer to 0030 and 0046, and 0052 and 0025, Lines 5-7, also, refer to 0028, updating, Lines 9-10).

Although Bachner disclosed the invention substantially as claimed, Bachner is silent regarding “after the replicating, retaining the first data elements and the second data elements at each of the first and second communication nodes until the first and second data elements are received by an intended archival system and a command is received to delete or modify the replicated data elements from the network”.

“when the dynamic connection is active, all data elements at any of the two or more of the communication nodes are replicated across the dynamic connection to all of the two or more of the communication node.”

“automatically generating, by the at least one archival system, the command to delete the replicated data elements from the network using the opportunistic data transfer when the

replicated data elements are received by the at least one archival system while retaining the replicated data elements on the at least one archival system."

Birkler, in an analogous art disclosed "after the replicating, retaining the first data elements and the second data elements at each of the first and second communication nodes until the first and second data elements are received by an intended archival system and a command is received to delete or modify the replicated data elements from the network"(refer to Col 3, Lines 40-50); and "when the dynamic connection is active, all data elements at any of the two or more of the communication nodes are replicated across the dynamic connection to all of the two or more of the communication node. (Synchronization, Col 4, Lines 25-43)."; and "automatically generating, by the at least one archival system, the command to delete the replicated data elements from the network when the replicated data elements are received by the at least one archival system while retaining the replicated data elements on the at least one archival system." (refer to Col 3, Lines 40-55 and soft delete, refer to Col 6, Lines 19-21);

Hence, providing the features disclosed by Birkler, would be desired for user to implement to prevent data loss when synchronization get interrupted.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Bachner by including the features eliminates replicating redundant data and reduce the data conflict after replicating.

2. Referring to Claim 2, Bachner discloses replicating includes comparing data stored locally at the first communication node with data stored locally at the second communication node (refer to 0046).

3. Referring to Claims 3, 21, and 23 Bachner discloses if the data stored at the first communication node includes first information that is not stored at the second communication node, the act of replicating includes storing a copy of the first information at the second node (it is obvious that the data are transmit in segments, refer to 0046).
4. Referring to Claims 4, 24, 25, Bachner discloses wherein the first information includes an instruction to delete information (updated information, it is obvious that it can be an delete information, refer to 0046 and 0036).
5. Referring to Claim 5, Bachner discloses wherein the first information includes an instruction to modify information (refer to 0036 and 0046).
6. Referring to Claim 6, Bachner discloses wherein the first communication node includes a first opportunistic data transfer protocol component and the second communication node includes a second opportunistic data transfer protocol component (nodes uses Bluetooth protocol which is the opportunistic data transfer protocol component, refer to 0027).
7. Referring to Claim 7, Bachner discloses wherein the first and second opportunistic data transfer components data transfer protocol components perform the acting of using the first and second monitor and for creating the dynamic connection (Bluetooth technology provide data



transfer when the two nodes are in fact, within range, refer to 0027, Lines 16, and 0035, Lines 20-31).

8. Referring to Claim 8, Bachner discloses a plurality of nodes (wireless phone, WIPs, display device, refer to 0027, Lines 1-2), and each nodes consists a monitor which using the first and second monitors and a third monitor (each devices uses Bluetooth protocol, which monitor if the device is within range, and pick up the data another device is trying to transfer, refer to 0027, Lines 14-17), at a third communication node to determine when the first, second and third communication nodes are within communication range, wherein the third communication nodes includes a third opportunistic data transfer protocol component (the third device comprising the Bluetooth protocol which is the opportunistic data transfer protocol components), and wherein at least one of the first, second and third communication nodes is mobile (wireless phone is the mobile, refer to 0027, Lines 1); and including the third communication node in the dynamic connection.

9. Referring to Claim 9, Bachner discloses third data elements at the third communication node, and wherein the act of replicating the first data elements and the second data elements includes replicating the first data elements, the second data elements, and the third data elements among the first, second and third communication node (refer to 0034).

10. Referring to Claim 10, Bachner discloses wherein when at least one of the first, second and third communication nodes is no longer within communication range, excluding the at least

one communication node from the dynamic connection (Bluetooth protocol only can transmit within the short range, if the device is out of the range, there will no longer be connection exist automatically.).

11. Referring to Claim 11, Bachner discloses wherein when the at least one communication node is again within communication range, including the at least one communication node in the dynamic connection and continuing to replicate data with at least one communication node across the dynamic connection (refer to 0030, when the device utilizing the Bluetooth protocol, and is within another device within the connection range, it replicate updated data across the connection).

Claims 12-18, 26-28, 34-35, 39, 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachner III et al hereinafter Bachner (US 2007/0055762) in view of Birkler et al hereinafter Birkler (US 6,466,951) in further view of Kizu et al hereinafter Kizu (US 2004/0179511).

12. Referring to Claim 18, Bachner discloses wherein the second and fifth communication nodes are the same communication node.

13. Referring to Claim 12, Bachner discloses wherein the dynamic connection is disconnected (when the two devices out of range, refer to 0030).

Although Bachner disclosed the invention substantially as claimed, Bachner is silent regarding

“after the replicating, retaining the first data elements and the second data elements at each of the first and second communication nodes until the first and second data elements are received by an intended archival system and a command is received to delete or modify the replicated data elements from the network”.

Birkler, in an analogous art disclosed “after the replicating, retaining the first data elements and the second data elements at each of the first and second communication nodes until the first and second data elements are received by an intended archival system and a command is received to delete or modify the replicated data elements from the network” (refer to Col 6, Lines 19-35). Hence, providing the features disclosed by Birkler, would be desired for user to implement to prevent data loss when synchronization get interrupted.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Bachner by including the features eliminates replicating redundant data and reduce the data conflict after replicating.

Although Bachner and Birkler disclosed the invention substantially as claimed, Bachner and Birkler are silent regarding “having more than three devices and all are having Bluetooth capability in order to replicating data in the opportunistic way.”

Kizu, in an analogous art disclosed “having more than three devices and all are having Bluetooth capability in order to replicating data in the opportunistic way (refer to Fig 4, how the data can be replicating in the one to plurality relationship, meaning, one device can transmit data to many devices, in the opportunistic way/Bluetooth protocol, refer to 0081).”

Hence, providing the features disclosed by Birkler, would be desired for user to implement because it can avoid the data conflict while replicating.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the systems of Bachner and Birkler by including the features eliminate replicating redundant data and reduce the data conflict after replicating.

14. Regarding to Claim 13, Although Bachner and Birkler disclosed the invention substantially as claimed, Bachner and Birkler are silent “regarding wherein the fourth communication node comprises an intended archival system that includes a storage device.” Kizu, in an analogous art disclosed “wherein the fourth communication node is an intended archival system that comprises a storage device (each device can stores information, refer to 0052).”

Hence, providing the features disclosed by Birkler, would be desired for user to implement because it can avoid the data conflict while replicating.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the systems of Bachner and Birkler by including the features eliminate replicating redundant data and reduce the data conflict after replicating.

15. Referring to Claim 14, Bachner discloses replicating data (refer to 0034).

Although Bachner disclosed the invention substantially as claimed, Bachner is silent regarding “after the replicating, retaining the first data elements and the second data elements at each of the first and second communication nodes until the first and second data elements are received by an

intended archival system and a command is received to delete or modify the replicated data elements from the network”.

Birkler, in an analogous art disclosed “after the replicating, retaining the first data elements and the second data elements at each of the first and second communication nodes until the first and second data elements are received by an intended archival system and a command is received to delete or modify the replicated data elements from the network”(refer to Col 9, Lines 39-50).

Hence, providing the features disclosed by Birkler, would be desired for user to implement to prevent data loss when synchronization get interrupted.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Bachner by including the features eliminates replicating redundant data and reduce the data conflict after replicating.

Although Bachner and Birkler disclosed the invention substantially as claimed, Bachner and Birkler are silent regarding “having more than three devices and all are having Bluetooth capability in order to replicating data in the opportunistic way.”

Kizu, in an analogous art disclosed “having more than 3 devices and all are having Bluetooth capability in order to replicating data in the opportunistic way (refer to Fig 4, how the data can be replicating in the one to plurality relationship, meaning, one device can transmit data to many devices, in the opportunistic way/Bluetooth protocol, refer to 0081).“

Hence, providing the features disclosed by Kizu, would be desired for user to implement because it can avoid the data conflict while replicating.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the systems of Bachner and Birkler by including the features eliminate replicating redundant data and reduce the data conflict after replicating.

16. Referring to Claim 15, Although Bachner and Birkler disclosed the invention substantially as claimed, Bachner and Birkler are silent regarding “having more than 3 devices.” Kizu, in an analogous art disclosed more than 3 devices and the device are mobile (refer to 0052, and 0143).

Hence, providing the features disclosed by Kizu, would be desired for user to implement because it can avoid the data conflict while replicating.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the systems of Bachner and Birkler by including the features eliminate replicating redundant data and reduce the data conflict after replicating.

17. Referring to Claim 16, Bachner discloses utilizing the Bluetooth protocol (refer to 0027), wherein, the Bluetooth technology is when devices are not within the communication range, the connection is disconnected.

Bachner and Birkler are silent regarding “having more than 3 devices.”

Kizu, in an analogous art disclosed system “having more than 3 devices and the device are mobile (refer to 0052, and 0143).”

Hence, providing the features disclosed by Kizu, would be desired for user to implement because it can avoid the data conflict while replicating.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the systems of Bachner and Birkler by including the features eliminate replicating redundant data and reduce the data conflict after replicating.

18. Referring to Claim 17, Bachner discloses replicating data (refer to 0034) and Bachner discloses utilizing the Bluetooth protocol (refer to 0027).

Although Bachner and Birkler disclosed the invention substantially as claimed, Bachner and Birkler are silent regarding system “having more than 3 devices.”

Kizu, in an analogous art disclosed system having “more than 3 devices and all are having Bluetooth capability in order to replicating data in the opportunistic way (refer to Fig 4, how the data can be replicating in the one to plurality relationship, meaning, one device can transmit data to many devices, in the opportunistic way/Bluetooth protocol, refer to 0081).”

Hence, providing the features disclosed by Kizu, would be desired for user to implement because it can avoid the data conflict while replicating.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Bachner and Birkler by including the features which eliminate replicating redundant data and reduce the data conflict after replicating.

Although Bachner disclosed the invention substantially as claimed, Bachner is silent regarding “after the replicating, retaining the first data elements and the second data elements at each of the first and second communication nodes until the first and second data elements are received by an

intended archival system and a command is received to delete or modify the replicated data elements from the network”.

Birkler, in an analogous art disclosed “after the replicating, retaining the first data elements and the second data elements at each of the first and second communication nodes until the first and second data elements are received by an intended archival system and a command is received to delete or modify the replicated data elements from the network”(refer to Col 9, Lines 39-50).

Hence, providing the features disclosed by Birkler, would be desired for user to implement to prevent data loss when synchronization get interrupted.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Bachner by including the features eliminates replicating redundant data and reduce the data conflict after replicating.

19. Referring to Claims 26, 27, 28, 40 and 41, Although Bachner and Birkler disclosed the invention substantially as claimed, Bachner and Birkler are silent regarding “wherein when high priority is gathered, the system is further configured for transmitting the high priority data to a desired location through the use of a secure link; wherein the secure link includes one of a cellular link and a satellite link; wherein the high priority data is transferred in real-time.”

Kizu, in an analogous art disclosed “wherein when high priority is gathered, the system is further configured for transmitting the high priority data to a desired location through the use of a secure link (refer to 0020); wherein the secure link includes one of a cellular link and a satellite link (refer to 0051); wherein the high priority data is transferred in real-time (Bluetooth allows data being transfer in real time.).”



Hence, providing the features disclosed by Kizu, would be desired for user to implement because it can avoid the data conflict while replicating.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the systems of Bachner and Birkler by including the features eliminate replicating redundant data and reduce the data conflict after replicating.

Claims 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachner III et al hereinafter Bachner (US 2007/0055762) in view of Chiang et al hereinafter Chiang “Routing in Clustered Multihop, Mobile Wireless Networks” (pages 1-6).

20. Referring to Claims 29, 30, and 31, Bachner discloses in a method of replicating data in a network communication system comprising:

utilizing a wireless communication system that does not require reliable network connection (wireless network does not provide reliable network connection);

and which includes a first communication node (wireless phone, refer to 0027, Lines 2) and a second communication node (display device, refer to 0026);

at least one communication node of the plurality is mobile and wherein at least one of the plurality of communication node is an intended archival system, and a storage device located at each communication node of the plurality (refer to 0026);

using a first monitor at the first communication node and a second monitor at the second communication node to determine when the first and second communication nodes are within a communication range of each other, wherein at least one of the first and second nodes is mobile

(refer to 0027, Lines 16, Bluetooth technology used on both nodes has sensors, provides dynamically connected to each other and transfer information when both nodes realized that they are within range); creating a dynamic connection between the first and second nodes while they are within the communication range (Bluetooth technology provides the functionality.); employing an opportunistic data transfer between the first and second communication nodes across the dynamic connection while the dynamic connection is activated, wherein the opportunistic data transfer comprises (Bluetooth technology provide data transfer when the two nodes are in fact, within range, refer to 0027, Lines 16, and 0035, Lines 20-31): retaining for future communication, first data element (data at the wireless phone) at the first communication node and second data element (data at 32, refer to 0025) at the second communication node when the dynamic connection is inactive (refer to 0030, refer to 0030); replicating the first data elements and the second data elements at each of the first and second communication nodes by propagating a redundant copy of the first data elements and the second data elements when the dynamic connection is active (refer to 0030 and 0046, and 0052 and 0025, Lines 5-7, also, refer to 0028, updating, Lines 9-10).

"if the first and second communication nodes are not determined to be privileged for the data replication, disconnecting the dynamic network" (alternate limitation, does not need to demonstrate in the reference).

Although Bachner disclosed the invention substantially as claimed, Bachner is silent in regarding "determine whether the first and second communication nodes are privileged for a data replication after the dynamic network has been created".

Chiang, in analogous art, disclosed “determine whether the first and second communication nodes are privileged for a data replication after the dynamic network has been created.” (refer to Page 2).

Hence, providing the features disclosed by Chiang, would be desired for user to implement in order to keep track of network connectivity.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Bachner by including the features disclosed by Chiang.

21. Referring to Claims 32 and 33, although both Bachner and Chiang both are silent on indicating the act of comparing includes comparing the data headers and comparing the file directory information, however, it is obvious of ordinary skill in the art to indicate that the act of replicating or synchronize the updated data from both side of node or computers, require the data's header and the file directory from both side to be compared.

22. Referring to Claims 34 and 35, although Bachner disclosed the invention substantially as claimed, Bachner is silent regarding “wherein when high priority is gathered, the system is further configured for transmitting the high priority data to a desired location through the use of a secure link; wherein the secure link includes one of a cellular link and a satellite link; wherein the high priority data is transferred in real-time.”

Chiang, in an analogous art disclosed “wherein when high priority is gathered, the system is further configured for transmitting the high priority data to a desired location through the use of a secure link (refer to page 2); wherein the secure link includes one of a cellular link and a satellite

link (refer to page 2 and 3); wherein the high priority data is transferred in real-time (refer to page 2).”

Hence, providing the features disclosed by Chiang, would be desired for user to implement in order to keep track of network connectivity.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Bachner by including the features disclosed by Chiang.

Claims 42-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birkler et al hereinafter Birkler in view of Chiang et al hereinafter Chiang “Routing in Clustered Multihop, Mobile Wireless Networks with Fading Channel” (pages 1-15).

23. Referring to Claims 42-46, Birkler discloses in a method of replicating data in a network communication system comprising:

utilizing a wireless communication system that does not require reliable network connection (wireless network does not provide reliable network connection);

and which includes communication nodes comprising at least one initiating node (100 refer to Fig 1), at least one intermediate node, and an archival node (110, refer to Fig 1) wherein at least one of the communication nodes is mobile (110, refer to Fig 1);

creating a dynamic connection between the first and second nodes while they are within the communication range (Bluetooth, refer to Col 3, Lines 15-16);

employing an opportunistic data transfer between the first and second communication nodes across the dynamic connection while the dynamic connection is activated, wherein the

opportunistic data transfer comprises (Bluetooth technology provide data transfer when the two nodes are in fact, within range, refer to Col 3, Lines 15):

retaining for future communication, first data element (data at the wireless phone) at the first communication node and second data element (data at 32, refer to 0025) at the second communication node when the dynamic connection is inactive (out of range, disconnected, is in Bluetooth capability);

replicating the first data elements and the second data elements at each of the first and second communication nodes by propagating a redundant copy of the first data elements and the second data elements when the dynamic connection is active (act of synchronizing, refer to Col 4, Lines 25-40);

continuing the activating and the employing between any pair of the communication nodes until one of the pair of communication nodes is the archival node (refer to Col 3, Lines 40-55);

generating, at the archival node, a delete command for the data elements when the data elements have been successfully received at the archival node (upon synchronizing, the apparatus could sent the delete command, refer to Col 6, Lines 5-30);

propagating the delete command to the communication nodes using the activating and the employing (refer to Col 3, Lines 40-55);

deleting the data elements at the at least one intermediate node when the delete command is successfully received thereby (refer to Col 3, Lines 40-55);

deleting the data elements at the at least one initiating node when the delete command is successfully received thereby (refer to Col 3, Lines 40-55);

Although both Birkler disclosed invention substantially as claimed, Birkler is silent in regards to “wherein the at least one intermediate node includes plurality nodes and the at least one initiating node includes a plurality of initiating nodes; wherein at least one of the plurality of intermediate nodes also acts as at least one of the plurality of initiating nodes; wherein the data elements generated by the at least one initiating node are transferred to at least two of the plurality of intermediate nodes before being transferred to the archive node.”

Chiang, in an analogous art disclosed “wherein the at least one intermediate node includes plurality nodes and the at least one initiating node includes a plurality of initiating nodes; wherein at least one of the plurality of intermediate nodes also acts as at least one of the plurality of initiating nodes; wherein the data elements generated by the at least one initiating node are transferred to at least two of the plurality of intermediate nodes before being transferred to the archive node.” (system provides multi-hop network, and where there are multiple nodes in the network, and each node propagate information from one to another, and each node saved a propagate information in its local copy and sent out the copy to the next node, therefore, each node could be initiating node and could also be intermediate, refer to Page 3-5)

Hence, providing the features disclosed by Chiang, would be desired for user to implement in order to keep track of network connectivity.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Bachner by including the features disclosed by Chiang.

24. Referring to Claims 47, although Birkler disclosed the invention substantially as claimed, Bachner is silent regarding “wherein when high priority is gathered, the system is further

configured for transmitting the high priority data to a desired location through the use of a secure link; wherein the secure link includes one of a cellular link and a satellite link; wherein the high priority data is transferred in real-time.”

Chiang, in an analogous art disclosed “wherein when high priority is gathered, the system is further configured for transmitting the high priority data to a desired location through the use of a secure link (refer to page 2); wherein the secure link includes one of a cellular link and a satellite link (refer to page 2 and 3); wherein the high priority data is transferred in real-time (refer to page 2).”

Hence, providing the features disclosed by Chiang, would be desired for user to implement in order to keep track of network connectivity.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the system of Bachner by including the features disclosed by Chiang.

### ***Conclusion***

**Examiner’s Notes:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the

specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen C. Tang whose telephone number is (571)272-3116. The examiner can normally be reached on M-F 7 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Art Unit: 2100

/K. C. T./

Examiner, Art Unit 2151

/John Follansbee/

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